

## INFORMATION SHEET

WATER RECYCLING REQUIREMENTS ORDER NO. R5-2007-TENTATIVE  
GLENN COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT  
CITY OF WILLOWS  
MOSQUITO FISH REARING PONDS  
GLENN COUNTY

### GENERAL INFORMATION

The Glenn County Mosquito and Vector Control District and the City of Willows (hereafter User), owns three mosquito fish rearing ponds (hereafter Use Area) proposes to recycle disinfected secondary recycled water from the City of Willows Wastewater Treatment Plant (WWTP), hereafter (Producer). The City of Willows owns the Willows Wastewater Treatment Plant, and ECO Resources, Inc. operates the wastewater treatment plant.

The three mosquito fish rearing ponds are located in Southeast Glenn County, adjacent to the City of Willows WWTP, on property owned by the City of Willows. The three mosquito fish rearing ponds are each approximately 75 ft wide, 300 ft long, and 4 ft deep. The recycled water is pumped (from the WWTP) into the old outfall ditch upstream of the Agricultural Drain C, and pumped (by a submersible pump), into the ponds from the outfall ditch. The outfall ditch is blocked from draining into Agricultural Drain C, to allow the User to pump the water into the mosquito fish rearing ponds.

The Producer's facility is located near the northwest boundary of the property, across the outfall ditch, from the three mosquito fish rearing ponds. The Producer's facility includes influent screening, extended aeration activated sludge, secondary clarifiers, continuous backwash filters, disinfections with sodium hypochlorite, dechlorination using calcium thiosulfate, equalization and emergency storage ponds, and sludge storage lagoons.

The Producer's Plant has a design average dry weather flow of 1.2 mgd. Treated effluent from the Plant is permitted to be discharged to an outfall ditch that drains into Agricultural Drain C or the Glenn Colusa Irrigation District Canal. The Plant is designed to provide advanced secondary treatment with average concentrations of BOD less than 10 mg/L; and average suspended solids less than 10 mg/L. The Plant is regulated under Waste Discharge Requirements Order No. R5-2006-0009 (NPDES No. CA0078034).

The User provides mosquito fish to Glenn County and the surrounding counties (which do not have mosquito fish sources). With the arrival of the West Nile virus and the limiting use of pesticides to combat the mosquito problem, the use of mosquito fish to fight the mosquito problem has been increasing. The mosquito fish ponds are maintained year around, are the mosquito fish are netted for distribution to approximately 20,000 acres of rice around the Willows area, and other acreage within Glenn and the surrounding counties. Glenn County contains approximately 64,000 acres of rice propagation. Additionally, the public sector can pick up the mosquito fish for placing in backyard surface waters.

Area soils consist of silty clays. Average annual precipitation is about 17.49 inches/year, according to information published by the California Department of Water Resources. Groundwater in the Use Area vicinity occurs in an unconfined aquifer at depths ranging from 6 to 7 feet below ground surface (bgs).

The Basin Plan encourages recycling wherever feasible. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, and industrial supply.

### **WATER RECYCLING REQUIREMENTS**

The Producer treats the wastewater to the standards required in Title 22 for disinfected secondary-22 treated recycled water.

The California Department of Health Services (DHS) has established statewide recycling water criteria effective 2 December 2000 in Chapter 3, Division 4, Title 22, California Code of Regulations (CCR), section 60301 et seq. (hereafter Title 22). The Order, as proposed, would require the User comply with Title 22 CCR requirements.

The Order, as proposed, would require the User to implement specific measures relating to the use of recycled water. These include (a) posting of warning signs around use areas to inform the public about the use of recycled water, (b) maintaining setback distances between recycled water use areas and domestic/irrigation wells, and (c) requiring that recycled water be used only to keep the ponds at full capacity. The Order, as proposed, would require the Producer to monitor the quality of recycled water and require the User to monitor its application in accordance with the proposed Monitoring and Reporting Program. Specifically, the proposed Order would require the User to report amounts of recycled water used in the mosquito fish rearing ponds (in gpd); inspect Use Area on at least a monthly basis to ensure that water recycling is in compliance with the proposed Order (e.g., setback distances between irrigation/domestic wells and recycled water applications); and provide the Central Valley Water Board with monthly and annual Recycled Water Quality Reports.

The conditions of discharge in the proposed Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. It may be appropriate to reopen the Order if applicable laws and regulations change, but the mere possibility that such laws and regulations may change is not sufficient basis for reopening the Order. The California Water Code requires that water recycling requirements implement all applicable requirements.

### **BASIS FOR PERMIT EFFLUENT LIMITATIONS**

These requirements are consistent with and implement the Chapter 3, Division 4, Title 22, CCR. When the recycled water is being applied to the mosquito fish rearing ponds, Article 1, Chapter 3, Division 4, Title 22 CCR requires that:

1. The wastewater be oxidized, which requires that its organic matter is stabilized, nonputrescible, and contains dissolved oxygen (§60301.650);
2. The wastewater be filtered, which requires that it be coagulated and passed through a specified filter media, and that it meets specific effluent turbidity criteria (§60301.320);
3. For a chlorine disinfection process, the product of total chlorine residual and modal contact time (CT) be a minimum of 450 mg-minutes per liter and the contact time be a minimum of 90 minutes (§60301.230(a)(1));
4. The median count of total coliform bacteria measured in the disinfected effluent not exceed 2.2 MPN /100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed (§60301.230(b);
5. The count of total coliform bacteria measured in the disinfected effluent does not exceed 23 MPN/100 mL in more than one sample in any 30 day period (§60301.230(b),
6. The count of total coliform bacteria measured in the disinfected effluent never exceeds 240 MPN/100 mL (§60301.650(2)(b)); and,
7. The turbidity of the recycled water shall not exceed any of the following:
  - a. An average of 2 Nephelometric turbidity units (NTU) within a 24-hour period;
  - b. 5 NTU more than 5 percent of the time within a 24-hour period; and
  - c. 10 NTU at any time.

### **CALIFORNIA ENVIRONMENTAL IMPACT REPORT**

The action to adopt water recycling requirements for this existing use is exempt from the provisions of the California Environmental Quality Act (CEQA) (Public Resource Code §21100, et seq.). The Central Valley Water Board concurs that the water recycling project will not result in significant impacts to water quality.

### **PROCEDURES FOR REACHING FINAL DECISION ON DRAFT WATER RECYCLING REQUIREMENTS**

The tentative water recycling requirements have been sent to the User and interested parties for review (at least 30 days) prior to formal presentation to the Central Valley Water Board. Any contested items on the permit will be heard and considered for change prior to formal adoption at the Board Meeting.

### **FOR FURTHER INFORMATION**

For further information or questions regarding this Water Recycling Requirements, contact Greg Cash at the Central Valley Water Board in Redding at (530) 224-3208.